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THE JOURNAL OF PHILOSOPHY

QUALITIES, RELATIONS, AND A PARADOX OF JUDGMENT

IN this article I propose to distinguish two types of qualities and relations, and to connect this distinction with a paradox alleged to infect judgment. The paradox alleged to infect judgment is connected with the theory that judgment is not only description, but also existential reference.[1] I will describe and discuss this paradox at length in section two below. The qualities and relations I wish to distinguish may be called *ontological* qualities and relations and *epistemological* qualities and relations. I will proceed at once to describe and illustrate these two types of qualities and relations and to indicate their distinction. This should open the way for understanding critically and for solving the paradox alleged to infect judgment.

I

First, *ontological* qualities and relations. A person says: "The St. John's church in this town is next to our one National Bank building." In this statement the person may be said to present a particular existent (the St. John's church of this town) as in a spatial relation (the relation of next-to or contiguity) to another particular existent (our one National Bank building). The person may add, "The spire of St. John's is, of course, gray"—thus presenting another particular existent (the spire of the St. John's of this town) but as possessing a color quality (grayness or gray). The church, the spire, and the bank building, we say, may be said to be presented in these statements as particular existents. By being presented as particular existents I mean that they are presented as in being and as distinctive in their being—e.g., as having a location and a designation which no other member of their specific class (no other St. John's church, no other National Bank building, no other church spire) actually has. They are existent and of their type unique. The relation "next-to" and the quality "gray" may appear to be presented here as existent, but not as distinctive or unique. But consider the statements: "The gray up there on the spire is whitish" and "The contiguity over there of St. John's and the bank might suggest an old-fashioned episco-

[1] J. Loewenberg, "The Paradox of Judgment," this JOURNAL, Vol. XXV (1928), pp. 197–205.

palian sermon." Here clearly the gray and the contiguity are presented as particular or distinctive as well as existent. The gray is presented as having certain unique characteristics—e.g., it is up there on the spire and it is the gray of this St. John's spire. Neither of these characteristics fits any other gray that exists. The contiguity is also presented as having certain unique characteristics —e.g., it is over there, a feature of the situation comprised by just these two buildings, and it is the contiguity of this St. John's church and that bank building, and neither of these characteristics fits any other contiguity that exists. Thus here the gray and the contiguity are presented as distinctive and marked off. They are presented not only as in existence, but also as exhibiting in their existence characteristics which make them of their type unique.

Qualities and relations such as a distinctive gray and a distinctive contiguity comprise the first type of qualities and relations I wish to point to. I have called this first type ontological qualities and relations. By the term "ontological" I wish chiefly to suggest that a quality or a relation, as belonging to this type, is a particular and an element of existence, and not a universal or an element of knowledge. The second type of qualities and relations, which may be called *epistemological* qualities and relations, are elements of knowledge or universals. Gray and contiguity, as concepts, may be taken as illustrations of this second type. True, a particular gray such as this gray on the spire and a particular contiguity such as this contiguity between these two buildings, are always ontological, never epistemological. They are perceived particulars, not conceived universals. Still, each particular gray (for simplicity I will take only the quality), although it is a particular and hence separate and distinct in its existence from every other particular gray, possesses for a mind a fund of meaning (its interpretation in terms of wave-vibration, its relation to white and black, etc.) which is equally possessed for a mind by all other particular grays. This fund of meaning constitutes the concept "gray" or gray as an epistemological universal. Two characteristics of gray as epistemologic should be emphasized here. In the first place, gray as epistemologic is not a particular localized here or here. It is equally here and here and here, or, more exactly, it is valid (not located) wherever there is a gray. Gray as epistemologic, in other words, is a universal. In the second place, gray as epistemologic is a concept. It is not a perceived existent such as the gray of this spire; it is a conceived meaning applying to, but not out there on, the spire. It is a factor in interpretation or in knowing. Such are qualities and relations as epistemologic. They are universal, not particular, and conceptual, not perceptual. They are comprised of a fund of meaning which, as valid for a

multiplicity of particulars, is a factor, not in presented existence, but in the interpretation of presented existence, i.e., in knowledge.

So much by way of indicating the nature of, and the distinction between, ontological and epistemological qualities and relations. Two objections to our position may be profitably considered at this point since they will enable us to carry our statement of it further. The first (1) would amount to a denial that there are such realities as ontological qualities and relations. The second (2) would amount to a denial that ontological qualities and relations, even if they existed, could be known.

(1) The best reason for denying the existence of ontological qualities and relations, so far as I know, is the following. Ontological qualities and relations, we have said, are particulars, but relations and qualities, it may be urged, are never particulars. A thing or an event is a particular, but a relation or a quality is always a universal. A red here is the same in quality as a red there, a contiguity here is the same as a relation, as a contiguity there. Events and things are constantly different, but qualities or relations of any kind are always identical. They are not distinctive or particular, they are the same always and everywhere, or they are always universals.[2]

There are several ways of meeting this argument but perhaps the simplest as well as the most advantageous would be to point to a quality or a relation which is undeniably a particular. The question is, after all, mainly one of fact and may be settled in this direct way. As an example of a quality which is undeniably a particular, we may turn to the one already used, the color quality gray. Gray, we have allowed, is in a sense a universal. But gray, we have said, is also in a sense a particular. Thus the gray of the sexton's coat is a particular. That is to say, it is a distinctive existent. This gray exists and it is distinctive among existents in that it is a color and among colors in that it is a gray and among grays in that it is the gray of this sexton's coat. No other gray is this, and this gray is no other gray. For instance, it is not the gray of this St. John's spire. The gray of the spire is yonder, a feature of the spire, but the gray of the coat is here, where the sexton is. And you may paint red over the gray of the spire and eliminate it, but provided this is all you do, the gray of the sexton's coat remains there before you uneliminated. In short, each of these grays is separate and has an individual existence and career. And this would be true in regard to the gray of the coat

[2] The idealist might add to this argument. An event or a thing, he might tell us, is always a presented *that*, but a quality or a relation is always a factor in terms of which the mind distinguishes this that and that that. In short, it is a *what*, a factor in interpretation, and so a universal.

and any other gray, the gray of the sky, the gray of the pavement. Each is a separate gray and marked off from the others by certain characters (e.g., location and designation) and by certain incidents (e.g., the gray of the pavement is becoming fresher and brighter now as it rains but the gray of the sexton's coat retains its ancient drabness) which indicate an individual career. The facts in the case of relations are no different. A relation such as contiguity is in a sense a universal. This we have allowed. But it is also in a sense a particular. Thus the contiguity of St. John's and that concrete walk (on the side distant from the bank) is a particular. That is, it is a distinctive existent. This contiguity exists since the walk and the church touch on each other, and it is distinctive—among existents in that it is a relation, among relations in that it is a relation of contiguity, and among contiguities in that it is the contiguity of St. John's and this walk. No other contiguity is this, and this contiguity is no other contiguity. It is not, for instance, the contiguity of St. John's and the National Bank building. For it is here, a feature of the situation comprised by the walk and St. John's, and not there, in the situation merely including the church and the bank building. And it arose, not from the construction of the bank as did the other contiguity, but later and under different circumstances and for different reasons. In short, this contiguity not only exists and is separate in its existence, but it is marked off by different characteristics and incidents (e.g., the circumstances and occasion of its occurrence) from the other contiguity and indeed from every other contiguity. It is one contiguity among many and distinctive in its class.

Relations as well as qualities thus exist and exist as distinctive in their existence. They may be particulars. This seems sufficient to show that they are not always universals, as stated in the objection here.

(2) But it may be asked: suppose particular relations and qualities do exist, how, pray, can they be known? Knowledge, it is clear, is a tissue of universals. The knowing mind can only grasp and proceed in terms of the universal. The particular eludes it. How then can ontological qualities and relations, which are particulars, be known? And if they can not be known, how can one intelligibly say that they are real?

Here again there are several ways of meeting the objection, the simplest of which would be to take a particular quality or relation (e.g., the gray of the sexton's coat) and show that as a fact it is known and can be fully known—indeed can be as fully known as any universal. This would be sufficient to meet the present objection, since the question of how a particular can be known presents

a real objection to our theory only as implying that as a matter of fact a particular can not be known at all. Another way of meeting the present objection would be to show that there is no actual theoretical difficulty in a knowledge of a particular. This would to some extent include the results of the former method. I propose to proceed in this way.

Two reasons at least may be given for holding that there is no theoretical difficulty in a knowledge of a particular. (i) It may be granted, I think, that knowledge is in terms of concepts or universals. In any case a particular—such as this horse or that odor, this fuzziness or that apple—is not a specimen of knowledge. Each particular is a specimen of existence, not a specimen of our information about existence. The unit of our information about existence is the concept or universal. Just because of this, however, we are given the first reason for holding that a knowledge of the particular is theoretically possible. For concepts, such as "spire" or "St. John's church" or "gray," as we have noted, are funds of meaning representing or expressing the general characteristics of a group or class of particulars.[3] The concept "spire" is a body of information about the general outlay and properties of each particular spire. And the same is true of "St. John's church" and "gray." Valid for each particular of its group, the content of the concept informs us as to the marks and possibilities that may be found in any particular of that group which we choose. In apprehending the concept, therefore, we apprehend a fund of genuine information about each particular of the group. This is certainly a knowledge, if only a general knowledge, of the particular. Further (ii), particulars, as a rule, are open to direct inspection. This horse can be pawed over and tested, that odor can be smelt and its source detected, the spire of St. John's and the gray of the sexton's coat can be seen and examined and watched, if anyone is fool or philosopher enough to watch them. Each of these particulars can be inspected and its history to some extent can be traced. This is the second reason why there is no theoretical difficulty in a knowledge of the particular. We can not only know the concept or general meaning which fits a particular, but, as a rule, we can come face to face with the particular itself and study out and know the incidents and even the individual features that uniquely characterize it. Of the gray of the sexton's coat, for instance, we can know not only that it is a color, that this color may be formed by a combination of white and black, that it is conveyed to the eye by such and such physical events—this the concept "gray" tells us about it; but also we can know that it is the gray we first saw as we

[3] Meaningless fictions, concepts of concepts, and so on, are here, of course excepted.

turned this corner two minutes ago, that it was just smudged with black paint from the freshly painted churchyard gate. We are able to see and watch this particular gray, and for this reason we are able to know these and similar features and incidents marking it. Thus theoretically we can know a particular not merely in a general way; we can even know it, as in the case of the gray of the sexton's coat, as marked by incidents and characters which mark no other gray and no other reality except it.

The two objections to our position raised here are therefore invalid. Particular qualities and relations exist and the particular can be known—face to face and from a distance. That there are epistemological qualities and relations, concepts such as "gray" and "contiguity," I think there can be no serious doubt. From this it follows that the distinction we have endeavored to draw in this section of our essay is valid. There are particular qualities and relations, and there are universal qualities and relations, and they are distinct as an apple from its idea.

One general conclusion may be drawn from these considerations. It will be remembered that ontological qualities and relations, as particulars, are specimens of existence, and comprise, along with other particulars, the realm of existence. Epistemological qualities and relations, on the other hand, as concepts, are elements of knowledge, and comprise, along with other concepts, the "realm" of knowledge. These two "realms," existence and knowledge, it is also clear, are in character and in contents as distinct as an apple from its idea. From this it follows that ontological qualities and relations, as elements of existence, may be dependent on knowledge for being known, but in regard to their existence and the existence of their existential characteristics they must be independent of whether they are known or not. As existents they are no part of the realm of knowledge; they comprise with other existents the distinct realm of existence. They must, therefore, exist if they exist (we have seen they do) outside of the realm of knowledge, and they must be all that existentially they are independent of whether they are as yet re-presented in our knowledge or not. Stated more widely, this conclusion is that the perceptible world, defined as the whole of particulars, is ontologically differentiated independent of our knowledge. The particular qualities and relations as well as the particular things and events into which it is thus differentiated are there in existence and in a full existential content apart from whether they are as yet expressed in concepts or not.

II

The paradox of judgment to which the above analysis should give us the clue is stated by Mr. Loewenberg in the article already referred to. I will here briefly restate it. Judgments, it is often said, refer to the "real." A person asserts, "This spire is gray." By this he is commonly supposed to be referring to something real. But what is this reality? Is it the occasion or the result of the judgment? Is it a mere name for something-we-know-not-yet-what, or is it something already determined and named? In the one case the reality is unqualified, naked of characters; in the other, it is qualified, but the possessor of those characters with which the work of description has already endowed it. And thus a paradox. If the real referred to in judgment is reality unqualified, it coalesces with the boundless sea of mere being and our judgment refers to anything or nothing—as you like. But if the real referred to in the act of judgment is reality determined and qualified, the only reality we could refer to in our judgment is one which the judgment itself or some other judgment has determined or qualified by description to be real. Thus either the reality referred to is anything-or-nothing, or it is reality determined by some metaphysical description. Reference in judgment accordingly is either to the vast ocean of mere being or to some metaphysical description by which we have given character and determination to it. This paradox may be stated in a slightly different way. Judgment, it is often said, at once refers to and describes the real. But what is this reality? Reference and description constitute a single act, "yet the referred real and the described real . . . can not be made to coincide. The referred real is indeterminate, the described real is determinate. The referred real is neutral in the sense of favoring no particular attribution; the real described is limited by the characters attributed to it. . . . The referred real coalesces with the boundless sea of being; the described real represents an arrested wave. . . . Hence the following dilemma. Either reality is prior or it is posterior to the descriptive act of judgment. If reality is prior to the descriptive act of judgment, it is nothing that judgment can descriptively refer to, since the conception of something anterior to the description of it is what we literally mean by the nondescript: it is . . . the night where all cows are black. And if reality is posterior to the descriptive act of judgment, it is no longer reality we are dealing with, but an ontology (i.e., reality as described and presented in a theory). In short, either there is nothing for judgment to indicate and to describe, or else the famous 'existential' reference of judgment turns out to be a description of a description."[4]

[4] *Op. cit.*, pp. 204–205. The parenthetical explanation is mine.

Mr. Loewenberg appears to have a solution for this paradox, but, so far as it is clear to me, it seems to accept and depend on the truth of the principle from which, as I should say, the whole paradox proceeds. This principle, however, is not, as Mr. Loewenberg appears to hold, that judgment fuses into one act both reference to and descriptive of reality.[5] Such a position, as I think and as I shall try to show, can be held without giving rise at all to this paradox of judgment. The ground of the paradox rather is the assumption clearly made and accepted by Mr. Loewenberg that prior to or independent of judgment [6] that which is to be judged is a mere indeterminate anything "neutral in the sense of favoring no particular attribution" and that thanks to judgment this mere anything attains an array of characteristics. As referred to, the assumption runs, the object of judgment is unqualified, naked of characters; thanks to judgment, it attains an outfit of distinguishing marks and comes out of the night where all cows are black. It is on this assumption that Mr. Loewenberg is able to show that the reference of judgment to reality is anomalous, that it must either be only a gesture in the night or else merely a description of a description. Indeed we are led by means of it directly to the conclusion which it appears is advocated by Mr. Loewenberg, that beyond description reference in judgment can not be said to have any real significance and should be denied to be a distinctive feature of judgment. In so far as reference is a feature of judgment, "the reference of judgment," as Mr. Loewenberg concludes, "is identical with description." [7]

But is the assumption on which this conclusion rests and on which the paradox of judgment turns, a valid assumption? I think that in light of the analysis presented in section one above, it must be pronounced invalid and false. The central feature of this assumption is that judgment creates the qualities and relations, i.e., the characteristics which mark a specimen of being. Independent of judgment, the assumption runs, that which is to be judged has being, but is indeterminate and characterless in its being; thanks to judgment, this indeterminate anything becomes marked and outfitted with an array of characteristics. We have, however, seen in section one above that the characteristics, i.e., the qualities and relations that mark a specimen of being *qua* being are what are called ontological qualities and relations. And the impor-

[5] Of the fusion in one act of reference to and description of reality, Mr. Loewenberg remarks: "This is the ultimate ground of the paradox." *Ibid.*, p. 204.

[6] The terms "prior to" and "independent of," I take it, have in this connection essentially the same meaning, namely, "when the difference made by judgment is put on one side" or some meaning very close to this.

[7] *Ibid.*, p. 205.

tant feature of these characteristics (e.g., that gray of the spire, this contiguity over here of these two buildings) is, we saw, that they are themselves existents. They are particulars, not universals, individual elements of being, not conceptual units of knowledge. They are independent of knowledge. From this I think it is clear that judgment does not create them. Were they concepts the story might be different, as concepts appear to owe their contents to the astuteness of judgment and their origin to the initiative of the judging mind. But these characteristics are particulars and specimens of being, not concepts, so that their existence is as is the existence (even according to Mr. Loewenberg) of any specimen of being which is judged: namely, it is given, and independent of and prior to, not created by, knowledge or judgment.

Thus Mr. Loewenberg's assumption that judgment creates the characteristics and attributes of adjudged objects (mere being apart) is invalid and false. Accordingly, since it depends on the above assumption, Mr. Loewenberg's conclusion that the rôle of reference in judgment must be held to be one with and absorbed in the rôle of description, is not at all necessary. Indeed, I think it is false, and that in the light of its falsity the anomaly of reference which constitutes the paradox of judgment is in truth no anomaly at all.

Independent of judgment, on our view, being which is to be judged is arrayed with a whole set of characteristics and attributes: it is ontologically determinate. This marks out distinct rôles for reference and description in judgment. Reference and description, it is true, are fused in one act; the judger refers as he describes. But the rôle of reference is to point to this ontologically determinate being, the rôle of description is to translate this being into epistemological determinations. The one directs, the other effects, the act of knowing. The one indicates a being already determinate, the other transcribes this existentially determinate being into its conceptual expression in knowledge. Thus reference and description are distinct. One is not absorbed by the other. And moreover, the anomaly of reference which constitutes the paradox of judgment here disappears. This anomaly, it will be remembered, is that judgment is said to be reference to reality and yet when we ask, what is this reality?, we must admit either that it is an indeterminate anything naked of all characters, or else it is a theory of reality which we have constructed beforehand. On the present view the reality referred to is neither. It is determinate, and clothed with a whole outfit of ontological characters. It is not an indeterminate anything naked of characters. And it is not a theory, for a theory is a tissue of concepts

whereas this reality is not at all comprised of concepts, but of particular existents. Thus reference on the present view has a reality to refer to which is not an abstraction and which as fully determinate can be pointed straight to without confusion with anything else. The referent is neither a blank nor a concept. For this reason there is no genuine anomaly in judgmental reference and the paradox of judgment accordingly disappears.

There are several objections to this position that may occur to a reader and I will state and consider them by way of conclusion.

(1) The first and the most important is suggested, if not stated, in Mr. Loewenberg's paper. It may be put as follows. How, it may be asked, can being be said to be differentiated prior to judgment? How can this building be said to be gray or green, or anything else prior to any judgment that it is so? We have claimed above, it may be said, not only that being is differentiated independent of judgment, but that we can know that this is so? But how can we know this? what basis is there for it? Clearly the only basis for this can be a judgment, so that we must ground on and defend by judgment the theory that being is differentiated prior to, and independent of, judgment. Surely there is a difficulty here.

In replying to this objection, two points may be presented. (i) We may first of all suppose there is a real difficulty here and ask how in connection with it the assumption made by Mr. Loewenberg stands. This assumption, which is the opposite of our own position, is that independent of judgment being is undifferentiated. How, we may ask, can this ever be proved or known? This assumption is clearly a theory if our view is a theory. And if a theory can in the end only be based on judgment, so must this. Thus our opponent must defend by judgment the theory that being is undifferentiated independent of judgment. Surely if there is a difficulty in our position due to the fact that judgment alone can render certain a state of affairs claimed to be independent of judgment, there is an equal difficulty in our opponent's view. But not only that. Not only must the theory opposite to ours be defended by judgment but in the end it can not be so defended. For if judgment is to state any first-hand and incontrovertible evidence in favor of this theory, it must in the end somehow present to us the thoroughly nondescript, the thoroughly undifferentiated. Yet, if judgment involves any differentiation at all and this on all hands is agreed to, judgment can never present the thoroughly nondescript and undifferentiated. Our first point thus may be stated in the form of a *reductio*. It is that the opposite of our theory, namely, that being independent of judgment is undifferentiated, not only in-

volves a difficulty if our own theory does, but that the validation of this theory, if supposed, involves an absurdity.

But (ii) I do not think there is any real difficulty for our theory in the fact that we must defend it by judgment. It is true, we grant, that our *theory* must be defended by judgment. But this presents no embarrassment since on our view a theory is a tissue of concepts, and concepts, as we have suggested, are indeed dependent on judgment. Moreover, because our theory that being is differentiated independent of judgment, is dependent on judgment, it does not follow that the independent being theorized on, is, after all, in so far as it is differentiated, dependent for its differentiation on judgment. This would be true only if our theory were the same as the being theorized on. But this is certainly not the case since the being theorized on, as we have seen, is clearly very different from a tissue of concepts.

(2) It may, however, be objected by some that we have not appreciated and presented the genuine anomaly of reference. The anomaly of reference, we have said, is that reference in judgment must be either to an existential anything (ontological blank) or to a theory of being. Truly stated, however, the anomaly is that the reference of judgment must be either to an I-know-not-as-yet-what (an epistemological blank) or to a theory of being. I do not think that this correction is correct, since Mr. Loewenberg describes the first alternative referent as "neutral in the sense of favoring no particular attribution" and that certainly means that this referent is ontologically a blank. But even if the correction here were correct and the first alternative referent were merely an epistemological blank, the alleged anomaly of reference would on our view still not be real. The second alternative referent we have seen is out of the question: when one refers to ontologically determinate being one is not referring to a theory or a tissue of concepts. And even if judgment were reduced for a referent to a reality epistemologically indeterminate (as is to a certain extent often actually the case), there would be no difficulty on our view as to how this reality could be determinately referred to. For on our view the referent independent of judgment would be there in existence differentiated and determinate. It would be distinctive in its being. This we have seen. But since what is distinctive may be singled out and pointed to, this being may without confusion be singled out and function as a referent.

(3) Two minor points require a brief consideration. (i) It may be urged that our position wholly under-estimates the true importance of judgment. We have denied that judgment is, as some idealists have held, the creative nexus of reality. But have

we not, in doing this, made judgment a superfluity? Judgment is, in our account, something that operates in a world already complete and made without it. Is not this the same as saying that judgment is a non-necessity and that reality can well do without it? In reply to this I should say that it is not true that judgment is on our view reduced to a superfluity. Judgment indeed is the constructive activity within knowledge and if there were no judgment there would be no knowledge. Judgment thus on our view is in a sense a necessity. It is a *sine qua non* of knowledge. It is, of course, true, however, that on our view reality would be differentiated without judgment. But it is also true (and this may be emphasized) that reality on our view would not be differentiated as it is without judgment. Reality as it is, is differentiated ontologically and epistemologically, but reality could not be differentiated epistemologically without judgment.

(ii) It may be urged, against our view that judgment is both reference and description, that many judgments describe, but have no ontological reference—for instance, the judgments of pure mathematics give us certain descriptions, but do not refer to any ontologically determinate being of which they are descriptions. Besides description, we have claimed, reference to the ontologic has a distinctive rôle in judgment. But what, it may be asked, does this reference do here? This objection plainly leads into considerations that are too extensive to be undertaken at this point. But it is clear at once, I think, that where judgments do not explicitly refer to any ontologically determinate being, as is often said of the judgments of pure mathematics, it is quite possible to hold that they are judgments whose ultimate truth will appear only when some reference to the ontologically determinate is made explicit. That is to say, the judgments comprising such systems as pure mathematics is often said to comprise might be considered merely as systems of *possible* truths. Still our point in regard to judgmental reference was not so much that every judgment has an explicit reference or even that this reference is always of a certain sort—namely, reference to the ontologically determinate. It was rather that where judgments are said to have reference and to refer to anything said to have being, this being independent of judgment is not at all unmarked and indeterminate, but distinctive and determinate. It is not at all a part of a night where all cows are black. Whether all judgments in the end have reference, which I think is true, or even whether the reference of judgment is always in the end to the ontologically determinate, which I think is possible, are, of course, questions of importance. But they do not require an answer, as I think, for the purposes of an immedi-

ate solution of the paradox of judgment as it has been presented in this and in Mr. Loewenberg's paper.

D. W. GOTSHALK.

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TIME-SYSTEMS AS PERSPECTIVES

IN this paper I wish to examine the problem of perspective in the terms of two rather well-known concepts: the concept of time-systems, as worked out in Mr. Whitehead's early philosophy; and the general concept of emergence which, in one form or another, has become the common property of a great many contemporary systems of philosophy. I wish merely to focus these two concepts on the problem which I am setting up as the problem of perspective without assuming responsibility, on this occasion, for the adequacy of either concept.

Owing to the nature of such problems, the problem of perspective considered here must be one peculiar to myself rather than *the problem of perspective* which is recognized by everybody. As far as I know, there is no universal form of the problem of perspective. The problem takes different forms according to one's preconceptions regarding space and time. It may be simple or inscrutable according to the nature of these preconceptions. I am calling my problem of perspective the problem of defining the situation for the occurrence of qualities. It is because I believe that *point of view* can somehow be implicated that I feel justified in calling a perspective *the situation for the occurrence of qualities.*

The situation for the occurrence of qualities involves spatio-temporal relations, and, to that extent, it is a *happening* or an *event.* Therefore, this analysis may also be considered an attempt to define the event. The relation between an event which is capable of being analyzed into elements comparable to spatio-temporal relations, and qualities which can not be so analyzed is properly defined by the conception of emergence. The category of causality binds them together in some obscure way; but beyond the assertion of this fact, the current doctrines of emergence do not enlighten us.

In so far as the time-system is "patient" of "ingredient objects," to use Mr. Whitehead's terms, it is the situation for the occurrence of qualities. To the extent of its adequacy as such a condition, it is a perspective according to my definition. I do not wish to be understood as admitting that the time-system is completely adequate as the situation for the occurrence of qualities; unilinear motion of a given type may be an essential factor in the

description of a given perspective, but it does not seem to be the only one. From my standpoint, it seems more nearly correct to say that the time-system is the locus of relevancy for certain partial or abstract statements about perspectives. I am denying that all nature, in the sense of nature in general, can be set up as the condition for qualities. My argument is away from the all-inclusiveness which usually prevails in such arguments as this back to a more clearly defined specificity. Whatever is said of all nature, in the capacity of being the situation for the occurrence of qualities, must take into account the patterned character of the organization of nature which properly constitutes a given perspective. There is no organization in general any more than there is a time-system in general. The efficacy of activity, then, as the condition for qualities, lies in its patterned character. I take this to be the result of following out to its ultimate conclusion the suggestion which Mr. Whitehead takes over from Leibniz in shifting the emphasis from *stuff* as substance to organized processes. The argument is sometimes made that process as substance makes qualities attributes of the *underlying* process. I refer particularly to Whitehead's[1] treatment of the "substrate activity" as substance and activity individualized as "modes" of this substance. This seems to involve an unnecessary mixture of categories which are diametrically opposed. After *stuff* has been rejected as the essence of substance, and materialism has been pushed aside as the unhappy offspring of a misplaced concreteness, *activity* turns out to be little more than the rejected stuff conception renamed.

So much will suffice for dogmatic assertions which, I hope, will antagonize the reader who has ventured this far into a careful consideration of the following argument.

As indicated already, the most abstract statement of Whitehead's earlier philosophy gives the so-called time-system as a perspective. Now a time-system is defined by the motion of bodies said to be in it. All bodies which are at rest with respect to each other make up what is called a "consentient set." They all lie in the same time-system. The significant features of objects occurring in a time-system, from this abstract point of view, are simply mathematical figures and their elements. With regard to all time-systems taken together, statements of these figures can be given location in terms of what Mr. Whitehead calls *puncts, rects,* and *levels.* Mr. Whitehead defines these concepts in his chapter on time.[2] The complete analysis of any event, in so far as it is relevant to all time-systems, reduces to terms of "event particles" as

[1] *Science and the Modern World,* p. 102. "In the analogy with Spinoza, his one substance is for me the one underlying activity."

[2] *The Principles of Natural Knowledge.*

they are defined and limited by their abstractive sets. The event particle is the medium of exchange between different time-systems; but as far as the *patterns* into which these event particles arrange themselves in the various time-systems are concerned, there are no elements which can be called identical. This point is basal in this argument. Perhaps the interval of relativity affords the nearest approach to a means of transcribing the patterns occurring in one time-system into terms of patterns occurring in another. It gives a kind of a method of dropping projections from elements in one time-system to corresponding elements in another. But the pattern as occurring in one time-system is, at best, a distorted image of what it is in another. *Pattern* means here the locus of certain prescribed event particles as they occur in a given time-system. All the event particles in the spatio-temporal continuum are the common property of all possible time-systems; but the difference is in the way these event particles relate themselves to one another in terms of spatio-temporal patterns. Now it happens that the significant features of an event, as a situation for the emergence of a quality, are these spatio-temporal patterns.

In order to develop this argument fully, it is necessary to take up some of Mr. Whitehead's points in connection with the ways in which time-systems relate themselves to each other. To begin with the simplest, two moments, *A* and *B*, belonging to different time-systems, intersect in an instantaneous plane which is common to the instantaneous spaces of both of the time-systems.[3] This instantaneous plane is called a *level*. It is obvious from this that there are strata along certain axes in which simultaneity occurs in the two time-systems in analogous ways. That is, all event particles of which the level is the locus are simultaneous with each other in the two systems, and these levels are generated by the intersection of a family of parallel[4] moments in one time system with an analogous family in another. The intersections give a family of parallel levels. The locus of these levels is the axis along which the relation of simultaneity holds. The interesting point here is that in each of these levels, taken separately, event particles are found which are simultaneous in either time-system; but the discrepancy arises when event particles in one level are cross-related with event particles in another. Event particles in different levels can not be simultaneous in either time-system, because in each time-system they occur in different moments. It is also true that the temporal span which separates the two occurrences is different for the two time-systems. That is, the duration separating the moments which include the event particles in one time-

[3] Whitehead, *The Concept of Nature*, p. 91.

[4] Moments belonging to the same time-system are said to be parallel.

system is unequal to the duration separating the two moments which include them in the other time-system. Concurrent simultaneities for two systems along one axis does not imply concurrent simultaneities along other axes.

If this argument is extended to a consideration of the intersection of three non-parallel moments, which is called a *rect*[5] (an instantaneous straight line in the instantaneous space of any of the three time-systems including the intersecting moments), we have a locus of symmetrical simultaneities which is now confined to instantaneous parallel lines lying within each of the instantaneous planes described above. The same argument now applies to the cross-relationship between event particles occurring in two of these instantaneous lines. This gives a set of one-dimensional loci along which simultaneity can be ascribed to event particles in all three time-systems. The interposition of another time-system into the company of the other three generates another instantaneous plane (by its intersection with one of the other time-systems) which can intersect each of these instantaneous lines in only one point (an instantaneous point flash). This defines the limit to which symmetrical simultaneities between two or more event particles can be ascribed to intersecting time-systems. Each of these time-systems contains every event particle, but the relation of simultaneity can exist only in limited loci in two and in three time-systems respectively. This is the important point of the argument: Two event particles, *a* and *b*, are common property of all possible time-systems; they are instantaneous point flashes occurring once each in the spatio-temporal continuum, but the distance in space and the duration of time which separate these event particles are functions of the time-system which is chosen as a frame of reference. There are three possible time-systems in which the temporal distance between any two arbitrarily chosen event particles can be reduced to zero. They are then separated only by spatial distance; that is, they are simultaneous in the three properly chosen systems. There are, likewise, two possible time-systems in which any three-arbitrarily chosen event particles can be reduced to a relationship of simultaneity in time; and they, analogous to the preceding case, are separated by spatial distances. If the two time-systems are properly chosen, all three event particles will lie within the locus of intersection. The crucial point is that the three event particles, *a*, *b*, and *c*, define only one two-dimensional axis of any event which contains them as parts. This locus of simultaneity contains all that is absolutely common, in the way of metrical relationships, to the two perspectives of any system of event particles which is intersected by it. For any other time-system, besides these three,

[5] *Ibid.*, p. 92.

which happen to intersect in the instantaneous plane defined by *a, b,* and *c,* the three event particles can not occur instantaneously. In one other properly chosen time-system, *a* and *b* are simultaneous, while *c* is separated from them by a duration. Analogously, there are two other time-systems in which simultaneity occurs for the two remaining pairs. In all other time-systems, all three of the event particles considered are separated by durations of various lengths.

Up to this point, I have tried to prove that the spatio-temporal patterns of any event are what they are with respect to a given frame of reference. I have used the relationship of simultaneity which is the simplest of all spatio-temporal relations between two event particles. Whatever holds for the relationship of simultaneity should hold for all other spatio-temporal relationships. Such relationships as *before* and *after* are too general to be of any significance. We would have to qualify them by the phrase *by so much* to give them sufficient specificity. Whatever applies to simultaneity must also apply to *before and after by so much.*

It remains to evaluate this evidence in terms of the concept of emergent evolution. It seems to me that any system of metaphysics which makes some sort of a *process* the condition for "emergent qualities" or "ingredient objects" should accept these principles: (1) that any uniqueness in patterns involved in the process should carry with it a corresponding uniqueness in the emergent qualities; (2) that a quality should always appear when its condition appears and vanish when its condition vanishes; (3) that any change whatsoever in a relation which is integral to the process should involve a change in the qualities which emerge. If these principles are accepted, it follows that the qualities which emerge are also relative to a frame of reference; that is, we pass from the relativity of relations to the relativity of qualities. The pattern of the process is simply not the same in one time-system as it is in another. The event particles are the same, but these are not constitutive of an on-going process any more than points are constitutive of space. The concept of the event is vague unless the frame of reference is specified. There are no relations of the character of those considered above which are what they are *in themselves,* without regard to any frame of reference, unless space and time are taken to be absolute in a strict Newtonian sense; but the general agreement that there is no such *time-system in general* seems to make it necessary to accept, not only spatio-temporal relations, but all relations, as relative to a frame of reference.

The so-called interval of the special theory of relativity does not provide a set of substitute relations capable of tying the world

of events up into one absolute system. The interval is like a bridge which spans a river; it is a means of getting from one bank to the other, but it is not a satisfactory substitute for either bank. The conception of the event, in its *underlying* or absolute character, points to the ghost of one of two avowedly rejected concepts: either the Newtonian conception of space and time according to which passage (activity) can mean something out of relation to any particular frame; or the *stuff* conception of substance which tends to make something out of activity which is, after all, different from and independent of the spatio-temporal relations which shape its patterns.

I believe that this argument from the relativity of relations to the relativity of qualities discredits the conception of activity as an underlying substrate, which Whitehead tends to make it, as well as the event as a kind of an Absolute of which qualities are aspects or *modes*. This latter conception is about what we should expect if we accepted the logic of emergent evolution on a background of Newtonian space and time.

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BOOK REVIEWS

La Théorie du Savoir dans la Philosophie d'Auguste Comte. MICHEL UTA. Paris: Félix Alcan. 1928. xix + 286 pp. 30 frs.

This meticulous and sympathetic study of Auguste Comte's theory of knowledge is the work of a Rumanian disciple of Professor Edmond Goblot, who writes the preface. It follows a shorter essay on the Law of Three Stages. The book is carefully worked out, but it is written in such a repetitious style that it moves with great slowness over what are, after all, rather short distances. Points are made over and over again with an obviousness that is fatiguing. This seems especially uncalled-for in view of the comparative simplicity of the Comtian epistemology. In fact there are probably a good many readers who would maintain that what Positivism, which prides itself (mistakenly) on not having a metaphysics, really lacks is an epistemology. To say with Comte that knowledge is what the history of the sciences shows it to have been, does not seem to them to constitute a theory of it. But just as the Positivist abjuration of all systems of metaphysics implies one, so the Positivist account of knowledge may call for an epistemology which Comte, for the lack of a completed psychology, would not and could not supply.

The first section of Dr. Uta's book explores the origins of Positivism. From among the host of Comte's precursors, he selects only d'Alembert and Saint-Simon as the "most representative." A selection obviously had to be made, for to have included all those from whom Comte borrowed would have been to have written the whole history of the philosophy of science. In the opinion of the present writer, however, Comte's antecedents should be treated in at least two distinct stages: one dealing with the already embryonic Positivism of Saint-Simon, and the other embracing both schools of Saint-Simon's immediate predecessors, the Traditionalists as well as the Encyclopaedists, de Bonald as well as d'Alembert. In spite of Dr. Uta's assertions to the contrary, it was in the mind of Henri de Saint-Simon, as Durkheim contends, that the plan of Positivism was born. It was there that the two streams of thought: Encyclopaedist progress[1] and Traditionalist order, met and mingled completely in a scientism which Comte did little more than develop and systematize. A study which goes back beyond Saint-Simon to d'Alembert (who was his boyhood tutor) as a representative *philosophe,* should also include the Theocrat de Bonald, whose central idea of respect for a strong social authority Saint-Simon greatly admired. A more elaborate treatment of Positivist origins would call for attention to Condorcet, Turgot, the Ideologists, Montesquieu, Locke, Bacon, and last but not least, to Descartes.

The author's treatment of these two of Comte's many intellectual ancestors, however, is sufficiently complete to demonstrate how little Comte himself added in the way of basic ideas. If space permitted, it would not be difficult to demonstrate that almost every major item of Positivism appears in germ among the writings of Saint-Simon or those of earlier thinkers: the intellectual order as the basis of social reorganization; philosophy as the general synthesis of the sciences; phenomenalism combined with agnosticism concerning metaphysics; the order of phenomena as imposing the order of knowledge; unification of knowledge by "natural indications," with decreasing generality as the key to the hierarchy; the law of successive stages from the conjectural to the positive; the impossibility of a positive philosophy without positive sciences; the substitution of laws for causes; and progress as the increasing displacement of the army and the church by science and industry. These ideas, moreover, are not placed by Comte in any new or startling juxtapositions. In what, then, did his contribution consist? In the fact that he found them in an *état d'esquisse,* mere

[1] It is true, as the author points out (p. 32), that the word "*progrès*" does not occur in the Encyclopaedia, coming into prominence only in the writings of Condorcet and Turgot. But this does not make the phrase any less suitable as descriptive of the teaching of the eighteenth-century *philosophes.*

suggestions of possibilities, and left them well-developed and woven into the strong fabric of his *Cours.* By firm strokes and patient elaboration of detail, he filled in the outlines of the great panorama of man's scientific achievements which his predecessors had merely sketched, and left it a monument for posterity to behold.

The author's exposition of Comte's ideas concerning knowledge begins with a reference to *"un mouvement anti-positiviste farouche"* which is "attempting the systematic destruction of that indispensable element in contemporary philosophy," a statement which has a strangely defensive air. He also pleads that the Positive Method be allowed to stand or fall on other grounds besides Comte's personal use of it. These remarks are symptoms of an uneasiness felt by many Positivists when they come to consider Comte's life and work as a whole. The trouble comes from the well-recognized bifurcation of his life into the "two careers": the scientific period of the *Cours;* and, after 1845, the religious period of the second *Politique,* with its ill-starred cult of Clotilde and Humanity. In spite of Comte's heroic efforts to reconcile the two, Dr. Uta eventually recognizes that although they may be psychologically continuous, logically they are "absolutely contradictory." Then why not treat them separately, segregating Comte's sociological aberrations from his earlier doctrines? Up to 1845, his use of the Positive Method is fairly consistent and needs no defense; after that date, no defense of his abuse of it, as logically consistent with his first theses, is any longer possible.

How shall we approach the problem of knowledge, according to the Comte of career number one? Not, in any event, as do the *criticistes,* who pretend to scrutinize the intellect itself directly in order to discover its nature and limitations. Instead, Comte would have us examine the finished products of knowledge. But not all knowledge; like d'Alembert he would study "not everything that has been thought in all the ages, but only what has been thought truly." That which has been "thought truly," to a faithful son of the Encyclopaedia, is that which has been thought scientifically. Our task, then, is one of retrospective reflection upon the results of the sciences. In the author's words: "The logical and sociological reconstruction of the history of the intelligence, individual and collective, reveals to us the origins and essence of knowledge." This is a fresh and an unconventional approach to the problem of knowledge, although some would regard it more in the light of an evasion of the real issues. Ancient philosophy, Comte tells us, treated its problems cosmologically; modern philosophy has become gnoseological. Comte, in the "century of history" would make philosophy thoroughly historical.

What are some of the characteristics of "true" or positive knowledge as revealed by the historical method? It is knowledge of the constant relations or laws of phenomena as sensed by us, and not of substances or causes, which are inaccessible to us. The order of natural phenomena is there to be known; the human intellect discovers it as best it can, but it does not create or add anything in the process. It merely renders more or less explicit what is already implicit. Explanation, which consists in "determining one fact by another," is possible because certain "facts" are more general than others, and are given to us just as directly as the less general. The order of our knowledge is a progressively-improving artificial rendering of the natural order, dictated by the latter, and sufficiently accurate to supply our needs. It is not only doubly, as Dr. Uta suggests, but triply relative: we know only relations, to begin with; we know only those which our organism is capable of grasping; and we know them only relatively to the state of scientific technique in our society.

Now as Comte's system developed, he began to see that any such genuinely objective classification of knowledge was impossible. Some sort of subjectivity was unavoidable. But he felt that he must at all costs avoid the perils of individual subjectivity,—James's "epistemological gulf" of subject-object dualism. So he argued that if society at a given period has produced a given scientific law, the occurrence is an objective fact. The knowledge exists subjectively only in the *social* consciousness. It must never be regarded as psychological; it is technological, and its study calls for a social laboratory, a need which the school of Durkheim has since been seeking to supply. The difficulty came when Comte admitted into this sociological theory of knowledge all manner of irrational human preferences of a theological nature which destroyed its positive character.

A number of weaknesses in the theory combined to prepare its downfall. Irked by the slow progress of his objective study of knowledge, Comte began to introduce suppositions concerning its outcome. He announced in advance that the order of positive knowledge when completed must be organic, because it must reflect an order of nature which, although multiple, is itself organic or hierarchical. He went further, and offered as the key to the relations of dependence which constitute the hierarchy, another supposition, the principle of decreasing generality. In the end this principle turned out to be at the bottom of the Law of the Three Stages, a development which the author declares " ruinous to the system as a whole." In his effort to substitute legality for causality, Comte also smuggles in a disguised form of finalism in his

principle of the conditions of existence, which returns to plague him later. Dr. Uta admits that Comte contributed little or nothing to our understanding of the inorganic sciences. But it was the realm of the organic, in which he won his most spectacular triumph, that witnessed his ultimate defeat. A gulf opened between it and the inorganic world that Comte was never quite able to close; and the subjective and synthetic approach which he felt that the organic order required eventually replaced the earlier objective analysis.

In these and many other respects Comte's original theory of knowledge afforded hints of what might become of it in the "second career." There it becomes a branch of that *sociologie* which seems to us today, ironically enough, to have been in the Theological Stage. Knowledge gets the unity demanded by the social order, no longer from the phenomena themselves, but from the homogeneity of method dictated by the new religion. Says Dr. Uta: "In the first phase, knowledge was the positive explanation of nature; in the second phase it was to determine the conduct of men. Knowledge loses its explanatory function in order to acquire an imperative one (p. 246). In the new religion . . . the relative replaces the absolute, the subjective the objective, the synthetic the analytic, the practical the theoretical, the religious the logical, the point of view of the whole that of the part, in a word, humanity replaces man" (p. 274).

The details of Comte's history of the progress of scientific knowledge have little more than an historical interest, so thoroughly have recent developments in the philosophy of science outdated his conclusions. And this in spite of the fact that, with his historical point of view, he above all others should have left ample room for progress. That he left so little may be attributed to his thirst for a stable social order upon a foundation of "finished" sciences. It is evident that the lack of anything but a highly metaphysical psychology in Comte's day presented an insuperable obstacle in the path of his peculiar epistemological enterprise. Just what he might have accomplished if he had been furnished even with the slender resources of modern Behaviorism, must remain a mystery; but that he inspired psychological progress in many directions, by his very failures, is crystal clear. The weaknesses of his formulation of the Positivist theory of knowledge as a whole, its undefended assumptions and its grotesque limitations, have been frequently rehearsed. More pertinent is the question whether it should be called an epistemology at all, or whether such an historical survey of finished knowledge should not have coined for it some such label as "epistemography." More vital still is the

question whether, no matter how cramped his view of the subject, Auguste Comte did not raise a needed protest against too much unhistorical epistemology, too much criticism *in vacuo*, and so did not hasten the overthrow of other inadequate theories of knowledge along with his own?

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Der Kampf um das Kausalgesetz in der jüngsten Physik. HUGO BERGMANN. Braunschweig, Germany: Vieweg & Sohn. 1929. Pp. 78.

This stimulating brochure, number 98 in a collection dealing with current questions arising out of the sciences and their applications, and dedicated to a former teacher, Professor Anton Marty, is from the pen of Dr. Hugo Bergmann, Director of the Hebrew University Library in Jerusalem. It is a lucid and comprehensive discussion, with many interesting references, of the question, whether the recent development of physics has, as some experimentalists are inclined to maintain, invalidated the principle of causality; or as Einstein, who contributes an opening paragraph, puts it more precisely, has rendered doubtful the possibility of its strict application. Not that Einstein himself has thrown doubt on its validity, for in his epoch-marking researches, he has been guided by a very definite interpretation of it, namely, that in the formulation of physical laws, only those factors can be regarded as causally connected which are capable of being observed. It is certain facts connected with the Quantum Theory that suggest the question discussed by Dr. Bergmann.

The author holds that the causal principle or postulate has two functions to fulfill in a theory of science, his general view of which shows the influence of Kant: (1) Determination of an objective time sequence; (2) Making possible a calculation of the past and the future (p. 11). Its general function seems to be still wider and to consist in rendering our experience coherent. Many thinkers, including H. Poincaré, have declared that belief in causality is identical with belief in a *universum*.

Bergmann discusses with acuteness the strangely persistent question, whether or not the relation between cause and affect is unidetermined, or as he expresses it, perfectly symmetrical; and decides that it is, pointing out that were it otherwise, so that different effects could emanate from the same cause or similar causes, then no inference would be possible from present to past events. It is not difficult to show, by the consideration of definite cases, that the opposite thesis results from a superficial analysis of the causal rela-

tion which concentrates on a part only of the total effect (pp. 14–34). A similar procedure directed to the cause would lead to the assertion that different causes had the same effect; which curiously enough is scarcely ever maintained. It is remarkable that notwithstanding Bergmann's sound position regarding the concept of causal relation, he later upholds the possibility of replacing the standpoint of strict causality or determinism by "a limited indeterminism of probability."

In the second chapter the alleged opposition between statistical laws, the significance of which has increased outside of economics in recent years, and the causal postulate is discussed. This opposition seems to be over-emphasized, since statistical laws, like the calculation of probabilities, involve the assumption of causal connections at bottom. The author refers to "Zufallsgesetze" (p. 31) in a way that is not intelligible, where no laws are presumably observable. Later, on page 46, a definition of chance seems to be required. He is referring to the phenomena connected with the breaking down of atoms, the causes of which are difficult, and, in some instances, impossible to define at the moment. Does it therefore follow that the movement of electrons is due to chance in the sense of being uncaused? Can chance mean positively anything more than coincidences which we have no ground for supposing depend on causal relations? The views of Planck, Nernst, Heisenberg, and Bohr are considered. They all tend to a reduction of human expectations in the way of causal knowledge. Against Heisenberg, Bergmann contends that quantum mechanics have not shown the invalidity of the causal principle, but at most the impossibility of applying it in every instance of change. We add: at present. It is doubtful that an exception to this principle could be established, because as Kant argued, it would not be an object of experience.

Bergmann attempts a conciliation between two contending standpoints, a sort of intellectual compromise, by declaring that it is sufficient to postulate for physics the applicability of the calculation of probabilities to reality (p. 49). In place of the causal principle, a more assumptionless postulate is: "that what possesses greater mathematical probability occurs oftener in nature." We shall not raise the point as to whether there is a circle in this formulation. But it has not the meaning of the causal postulate, which, contrary to the teachings of some logicians, does not require the repetition of similar phenomena. Apart from the fact that Bergmann's principle might be, and probably would be, of no value in inferences from the present to the past, it is difficult to reconcile it with his earlier polemic against Reichenbach, inasmuch as he now admits: "die straffe Gesetzmässigkeit der Kausalität ist aufgelockert. . . . In der

Tat sind die Bedenken nicht klein. . . . Das Wunder ist naturgesetzlich möglich geworden" (p. 58).

Passing over Chapter III, in which Teleology is dismissed from the sphere of physics, a few remarks may be made in connection with the topic of the final chapter, entitled "Wahrscheinlichkeitszusammenhang und Willensfreiheit."

A certain indefiniteness in the application of quantum mechanics has opened a welcome road for some physicists to travel, whose psychological and ethical investigations have been more limited than their physical, and who are worried by the thought that human behavior is determined like other events. Even a critical mind, like H. Poincaré's, was concerned to find, in his *Dernières Pensées*, a place for the freedom of the will or, more correctly, of willing. The assumption is that such freedom is indispensable to ethics. Strangely enough, a definition of this capacity is rarely offered, as might be expected from those trained in scientific method; although no physicist is likely to go as far as Bergson in recommending his followers not to attempt to define it, since in the act of doing so, it becomes impossible to maintain.

Does the physics of atoms suggest that there are events which are not effects? Are human actions such events, representing uncaused or unconditioned beginnings? A scientific, as distinguished from a literary, psychology, like Bergson's, can not proceed on any such assumption. The philosophical concept of freedom is that of self-control and self-determination (within limits), which results from an education and training of personality, both the theoretical and practical basis of which is causality.

Bergmann's treatise can be recommended as an excellent introduction to recent developments in the application of the causal concept.

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Essays in Honor of John Dewey. On the Occasion of His Seventieth Birthday, October 20, 1929. New York: Henry Holt & Company. 1929. $5.00. (The contributors to this volume, former or present colleagues of Professor Dewey, and the titles of their essays, are as follows: "Personality, How to Develop It in the Family, the School, and Society": *Felix Adler,* Columbia University; "Religious Values and Philosophical Criticism": *Edward Scribner Ames,* University of Chicago; "Evolution and Time": *Albert G. A. Balz,* University of Virginia; "Art, Action and Affective States": *Harold Chapman Brown,* Stanford University; "Two Basic Issues in the Problem of Meaning and of Truth": *Edwin Burtt,* University of Chicago; "Kant, Aquinas, and the Problem of Reality": *Cornelius Clifford,* Columbia University; "A Pragmatic Approach to Being": *William Forbes Cooley,* Columbia University; "Consolation and Control. A Note on the Interpretation of Philosophy": *John J. Coss,* Columbia University; "A Philosophy of Experience as a Philosophy of Art": *Irwin Edman,* Columbia University; "Dimensions of Universality in Religion": *Horace L. Friess,* Columbia University; "A Criticism of Two of Kant's Criteria of the Aesthetic": *Kate Gordon,* University of California at Los Angeles; "A Pragmatic Critique of the Historico-Genetic Method": *Sidney Hook,* New York University; "Certain Conflicting Tendencies within the Present-day Study of Education": *William H. Kilpatrick,* Columbia University; "Causality": *Sterling P. Lamprecht,* Amherst College; "Externalism in American Life": *M. T. McClure,* University of Illinois; "The Empiricist and Experimentalist Temper in the Middle Ages. A Prolegomenon to the Study of Mediaeval Science": *Richard McKeon,* Columbia University; "The Nature of the Past": *George H. Mead,* University of Chicago; "A Functional View of Morals": *Simon F. MacLennan,* Oberlin College; "A Materialistic Theory of Emergent Evolution": *William Pepperell Montague,* Columbia University; "What is Meant by Social Activity?": *Ernest C. Moore,* Univer-

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Schultz, Julius: Die Maschinentheorie des Lebens. Zweite völlig um gearbeitete Auflage. Leipzig: Felix Meiner. 1929. viii + 194 pp. 7.80 M.

Sechzehntes Jahrbuch der Schopenhauer Gesellschaft für das Jahr 1929. Ausgegeben am 21 September, 1929. Heidelberg: Carl Winter's Universitätbuchhandlung. 1929. xiii + 328 pp.

Snyder, Alice D.: Coleridge on Logic and Learning with Selections from the Unpublished Manuscripts. New Haven: Yale University Press. 1929. xvi + 169 pp. $3.00.

Woodbridge, Frederick J. E.: The Son of Apollo. Themes of Plato. Boston: Houghton Mifflin Co. 1929. ix + 272 pp. $4.00.

NOTES AND NEWS

We are glad to print the following announcement of a Memorial to Professor L. T. Hobhouse:

The recent death of Professor Leonard Hobhouse came as a shock to his friends, who had looked forward to his having a good many years of further work and of development of the unique position which he has held in the study of the social sciences. We feel sure that many of those who directly or indirectly have come into contact with his work will wish to help in the establishment of some Memorial Fund with which his name may be permanently associated, and which may be used to assist in the perpetuation of his influence.

We accordingly invite subscriptions to such a fund. We hope that those who subscribe may leave us who sign this appeal, as a committee representative of the many sides of life which Professor Hobhouse touched, to frame a scheme for the Memorial, and to settle at a later date whether any fund raised can be used best for a lectureship, a scholarship, or the publication of studies in the social sciences.

Subscriptions may be sent to Dr. G. P. Gooch, 76 Campden Hill Road, W 8, London, who has agreed to act as Treasurer of the fund.

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The American friends of Professor Hobhouse have formed a committee to further the object referred to in the above memorandum. The committee consists of John Dewey, Franklin H. Giddings, Robert M. MacIver, Charles E. Merriam, William F. Ogburn, and Edwin R. A. Seligman, Chairman. American subscribers to the fund are asked to communicate with the chairman of the American Committee, Prof. E. R. A. Seligman, Columbia University, New York City.

The Schermerhorn Lectures for 1929, given each year at Columbia University, will be held this year on Tuesday and Thursday afternoons in November and December at 4:30 p.m., at the Casa Italiana of Columbia University, by Professor Vittorio Macchioro, of the Royal University of Naples, and Visiting Professor at Columbia University. The subject of the lectures will be Orphism, Its Essence, Origin, and Evolution. The dates and subjects of the individual lectures are:

Nov. 12. Greek Mysticism.
Nov. 14. The Orphic Ecstasy.
Nov. 19. The Orphic Mystery.
Nov. 21. The Orphic Palingenesis.
Nov. 26. The Orphic Creed.
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